

XX. *A Letter from John Bevis, M. D. to the Rev. Thomas Birch, D. D. Secretary to the Royal Society; containing Astronomical Observations, made at Vienna, by the Rev. Father Joseph Liefganig.*

Dear Sir ;

Read April 25, 1765. **F**ATHER Liefganig, in a very polite and sensible Latin letter, dated Vienna, April 3, 1765, informs me, that a correspondence between himself and me had been recommended to him by Father Boschowick, who paid him a visit in his return from Constantinople ; and Father Boschowick above a year ago sent me a very high character of his confrere's affection, assiduity, and abilities for astronomical observations. You will, therefore, Sir, be pleased to lay the inclosed sett, which I have just received from him, before the Royal Society ; as they, indeed, appear to me to have been made with much care and circumspection.

By his own account, he was appointed to the Observatory of the Jesuits College at Vienna towards the end of 1754 ; where he found, indeed, a large stock of instruments, but mostly unfinished and imperfect ; that, after spending a whole year in getting them fit for use, he had disagreeable and unavoidable avocations, which kept him some years from resuming the care of his beloved Observatory ;

but that now he finds himself in possession of the following complete apparatus.

1. Two mural quadrants, each of nine feet radius, placed north and south in the meridian (the Vienna to the London foot, as 10000 to 9646).

2. A six feet quadrant, supported by a vertical axis, and convertible to any azimuth.

3. A ten feet sector, constructed in P. Boschowick's manner.

4. A four feet quadrant, placed on the azimuth circle which Tycho Brahe used at Prague.

5. A moveable quadrant of  $2 \frac{1}{2}$  feet radius, which he used in the mensuration of three degrees on their meridian, by order of the Empress Queen, by means of a series of triangles, the result whereof he is calculating at this time.

6. A transit instrument of  $6 \frac{1}{2}$  feet.

Together with several fixed telescopes, a gnomon 14 feet high, micrometers, &c. of all which he intends to publish a particular description, with his observations taken at Vienna reduced and compared with astronomical tables. He makes the latitude of his observatory, at the Jesuit's College,  $48^{\circ} 12' 35''$ .

Dear Sir,

Your affectionate,

and most obedient servant,

Clerkenwell-Close,  
April 4, 1764.

J. Bevis.

1764. Occultatio Spicæ ♄ a Luna, Februar. 20.

Temp. Horolog.	Tempus Verum.	
h / "		
o 19 20,1	20 die Febr.	Meridies ex altitud. correspond. ☉
o 19 8,6	21 die	Meridies
	h / "	
15 10 13,0	14 51 0,0	Immersio Spicæ in Limb. ☽ lucid.
16 11,7	56 58,8	☽ Limbus orientalis in Meridiano.
16 13 28,7	15 14 16,2	Emersio Spicæ ex Limbo obscur.
18 26 52,5	18 7 41,1	☿ Ophiuchi in Meridiano. Hujus altitudo major erat, quam altitudo Limbi ☽ Australis 6' 22'',5.
		Mercurius in Barom. 27 d. 10,5 l. Paris.
		———— in Therm. Reaumur. + 7,0

Eclipsis ☽, die 17 Martii.

Temp. Horolog.	Tempus Verum.	Barometri variatio à die 17 ad 18 erat à 27 d. 11 l. ad 27 d. 8 l.
h / "		Thermometri à + 4 ad + 5
o 14 57,9	die 17	Merid. ex altit. correspond. ☉
o 18 45,6	die 18	Merid.
24 o 8,3		Reolutio Fixarum ex culminatione Rigel in Tubo fixo.
	h / "	
	11 44 45	Initium dubium umbræ densæ.
	47 47	Obscuratio o dig. 47'.
12 14 32,9	57 41,4	☽ Limbus occid. in Meridiano
15 15,4	58 23,9	☽ cornu præced. infer. in Merid.
16 42,4	59 50,8	☽ cornu sequens super. in Merid.
16 54,4	12 o 2,8	☽ Limbus orientalis in Meridiano.
		☽ cornu sequens altius erat quam Limb. ☽ eclipsatus, 8' 25''.
	12 3 25	Grimaldi medium immergitur.
	6 34	Obscuratio 3 ½ dig.
	8 15	Pitatus totus.
	10 28	4 dig.
	14 26	4 ½.
4		

Quad. fixo 9 ped.

Tem.

Temp. Horolog.	Tempus Verum.	
h / "	h / "	
	18 27	5 dig.
	22 35	5 $\frac{1}{2}$ .
	24 28	Fracastorius tangitur, seu incipit im- mergi.
	25 35	Fracastorii medium.
	26 32	Keppleri medium.
	26 57	6 dig.
	27 5	Fracastorius totus.
	29 30	Copernicus tangitur.
	31 54	6 $\frac{1}{2}$ .
	33 31	Copernicus totus.
	37 30	7.
	38 54	Eratosthenes tangitur.
	39 29	Langrenus tangitur.
	41 30	Langreni medium.
	42 51	Langrenus totus.
	43 40	7 $\frac{1}{2}$ .
	46 7	Manilius tangitur.
	48 15	Manilius totus.
	49 25	Menelaus et Taruntius tanguntur.
	51 10	Menelaus totus, et obscurat. 8 dig.
	54 12	Promontorium Somni tangitur.
	55 37	Mare Crisium tangitur.
	57 24	Proclus.
	59 30	Obscuratio maxima, 8 dig. 23'. Dura- vit fere 12'.
	13 10 10	Mare Crisium totum immergitur.
	23 50	Grimaldi medium emergit.
	24 48	Grimaldus totus emergit.
13 47 25,4	30 19,4	ζ ♄ in Meridiano. Culminantis ɔ lim- bus australis altior erat quam ζ ♄, 6'. 24".
	13 37 46	7 dig.
	43 4	6 $\frac{1}{2}$ .
	43 40	Manilius totus emergit.
	45 25	Menelaus totus.
	48 6	6.
	51 9	Schikardi medium.
	52 50	5 $\frac{1}{2}$ .

Tempus Verum.			
h	'	"	
	53	27	Schikardus totus.
	56	53	5.
14	0	10	Proclus.
	0	55	$4\frac{1}{2}$ .
	1	17	Maris Crisium medium.
	2	5	Promontorium Somni totum.
	4	52	4.
	5	19	Tychonis medium.
	6	7	Tycho totus.
	7	21	Taruntius totus.
	8	49	$3\frac{1}{2}$ .
	8	52	Promont. acutum.
	12	40	3.
	16	15	$2\frac{1}{2}$ .
	19	28	2.
	22	39	$1\frac{1}{2}$ .
	25	35	1.
	27	16	$\frac{1}{2}$ .
	29	30	Finis umbræ densæ.

Eclipsis ☉, ante et post Meridiem 1 Aprilis.

Ante Observationem Eclipses referam Solis et Stellarum in ejus Parallelo constitutarum, culminationes, iis diebus observatas. Barometrum 1 et 3 Aprilis fere ad 27 d. 9 l. constitit; 2 Aprilis vero circa Meridiem ad 27 d. 10 l. Paris. Reaumurianum Therm. ostendit fere + 7: Procyone vero 3 Aprilis culminante + 8,9.

Temp. Horolog.			Tempus Verum.			
1 April.						
h	'	"	h	'	"	
0	7	31,7	23	58	56,0	☉ cornu Australius in Meridiano.
3	8	35,7	0	0	0,0	☉ centrum ex altitudibus correspond.
0	0	24,7	0	0	49,0	☉ cornu Borealius.
10	10	29,5	10	2	2,8	d ☉. Stella hæc Borealis erat quam limb. ☉ Australis culminans, 11'. 7,3": et Australior, quam cornu ☉ Boreum cul- minans, 6'. 48", 1.
23	56	0,8				Revolutio fixarum à 1 ad 2 Aprilis.
2 April.						
0	8	14,0	0	0	0,0	☉ centrum in Meridiano.
10	6	30,5	9	58	25,5	d ☉. Stella australior erat quam limb. ☉ australis culminans, Micrometri Revolut. 6, $\frac{1}{100}$ , seu 3'. 47", 0.
23	56	0,6				Revolutio fixarum à 2 ad 3 Aprilis.
3 April.						
0	7	53,1	0	0	0,0	☉ centrum in Meridiano.
6	41	37,8	6	33	50,4	Procyon. Stella Borealis erat quam ☉ limbus superior Micrometri Revol. 4,46, seu 2'. 44", 5.
31 Martii.						
22	21	50				Initium Eclipses ☉. Pro determinanda quantitate Eclipsis usus sum Tubo dioptrico præclaro 5 $\frac{1}{2}$ ped. Microme- tri Revolutiones 34,14 Diametrum ☉ eo die æquabant. Definivi autem quantitatem obscuracionis ad singulas Revoluciones cochleæ micrometricæ, et inde ad digitos reduxi,

Tempus

Temp. Ver.				
h	'	"		
22	30	4	1	dig.
	32	2	1	15'
	34	0	1	30
	36	7	1	45
	38	14	2	0
	40	16		15
	42	2		30
	43	56		45
	46	12	3	0
	48	23		15
	50	28		30
	52	22		45
	54	23	4	0
	56	31		15
	58	41		30
23	0	54		45
	3	1	5	0
	5	14		15
	7	25		30
	9	40		45
	11	46	6	0
	13	59		15
	16	11		30
	18	36		45
	21	15	7	0
	23	47		15
	26	7		30
	28	39		45
	31	25	8	0
	34	20		15
	37	15		30
	40	10		45
	43	6	9	0
Sol eclipsatus imminet Meridiano				

Thermom.Reaumur-  
rianum loco con-  
fucto, quo radii  
solares non per-  
tingunt, positum,  
durante Eclipsi  
vix ultra  $\frac{1}{2}$  grad.  
mutationem subiit.  
Therm. vero ejus-  
modi Soli objec-  
tum ostendit.

+ 18,0

17,8

16,2

15,2

14,5

13,2

Temp.

Temp. Ver.			
I Aprilis.			
h	'	"	d ' "
0	27	24	6 30 14,7
	29	41	15
	32	2	0 16,5
	34	14	5 45
	36	27	30
	38	29	15
	40	45	0 18,0
	43	6	4 45
	44	58	30
	47	6	15
	49	17	0
	51	31	3 45 18,5
	53	37	30
	55	53	15
	58	10	0
	59	58	2 45
I	I	58	30 19,0
	3	50	15
	6	38	0
	8	38	I 45
	10	41	30 21,2
	12	42	15
	14	25	0 21,5
	23	13	

Finis Eclipsis tubo dioptrico insigni  
Eustachii Divini, pedum fere 12.



15 Aprilis.

Occultatio Spicæ  $\varpi$  à  $\gamma$ .

Tempus Verum.			
h	'	"	
11	21	41,7	

Immerfio Spicæ  $\varpi$  in Limbum  $\gamma$  lucidum tubo dioptrico Diviniano 12 pedum. Stellam tempore Emerfionis non vidi nifi jam à  $\gamma$  Limbo diftantem, tum ob nubes, quæ intercefferant, tum ob nimiam Lunæ fere plenæ lucem.

Aliæ \*\* Occultationes Viennæ obfervatæ.

1736, Augufti	2	Occultatio	$\alpha$ $\gamma$ .
1736, Octobr.	22	—————	$\alpha$ $\gamma$ .
1737, Martii	8	—————	$\alpha$ $\gamma$ .
1738, Octobr.	2	—————	$\alpha$ $\gamma$ .
1756, Decemb.	5	—————	$\alpha$ $\gamma$ .
1757, Decemb.	12	—————	$\epsilon$ $\gamma$ .
1760, Martii	29	—————	$\gamma$ $\varpi$ .
1762, Februar.	2	—————	$\gamma$ $\varpi$ .
1762, Martii	2	—————	$\theta$ $\varpi$ .

N. B.  $\gamma$  hic adfcriptis diebus etiam in Tranfitu per Meridianum obfervata eft. Stellarum,  $\odot$  et  $\gamma$  altitudo in Tranfitu per Meridianum femper obfervatur in Quadrante murali 9 pedum, nifi aliud Inftrumentum indicetur.